

1 Claim 1. A computer-implemented real-time decision support system
2 comprising:

3 means for receiving complex queries posed by a plurality of users;

4 means for providing for each of the queries an executable query process
5 furnishing a result when data sources satisfy constraints of the query;

6 means for providing data sources, the data sources including an event
7 source;

8 means for responding to an event furnished by an event source to initiate
9 execution of all query processes having constraints satisfied by data
10 sources; and

11 means for furnishing results of executed query processes to users.

1 Claim 2. A system as claimed in Claim 1 in which the means for
2 responding to an event comprises means for providing an index for
3 testing whether constraints of a query process match attributes of
4 events.

1 Claim 3. A system as claimed in Claim 1 in which all query processes
2 having constraints matching attributes in an event are executed
3 simultaneously.

1 Claim 4. A system as claimed in Claim 1 in which a query process is
2 persistent until removed.

1 Claim 5. A system as claimed in Claim 1 in which the means for
2 providing for each of the queries an executable query process includes
3 means for changing the query processes for which results are required.

1 Claim 6. A system as claimed in Claim 1 in which the means for
2 furnishing results of executed query processes to users comprises means
3 for providing results to users whenever incremental changes in query
4 results occur.

1 Claim 7. A system as claimed in Claim 6 in which the means for
2 providing results to users whenever incremental changes in query results
3 occur includes means for determining incremental changes in query
4 results.

1 Claim 8. A system as claimed in Claim 1 in which the data sources
2 comprise an event service.

1 Claim 9. A system as claimed in Claim 1 in which the means for
2 furnishing results of executed query processes to users comprises an
3 event service.

1 Claim 10. A system as claimed in Claim 1 in which the means for
2 providing data sources comprises means for providing historical data.

1 Claim 11. A process for providing the incremental results caused by
2 incrementally-occurring changes in data to complex queries comprising
3 the steps of:

4 receiving complex queries posed by a plurality of users,

5 generating an executable query process for providing results required by
6 each of the queries,

7 receiving data including events from data sources,

8 responding to events by executing all query processes having constraints
9 satisfied by data sources to provide results required by each of the
10 queries, and

11 furnishing results of executed query processes to users.

1 Claim 12. A process as claimed in Claim 11 in which the step of
2 responding to events comprises testing whether constraints of a query
3 process are satisfied by attributes of events.

1 Claim 13. A process as claimed in Claim 11 in which all query
2 processes having constraints satisfied by data sources are executed
3 simultaneously.

1 Claim 14. A process as claimed in Claim 11 in which a query process is
2 persistent until removed.

1 Claim 15. A process as claimed in Claim 11 in which the step of
2 generating an executable query process includes a step of changing the
3 query process for which results are required while the process is
4 functioning.

1 Claim 16. A process as claimed in Claim 11 in which the step of
2 furnishing results of executed query processes to users comprises a step
3 of providing results to users whenever incremental changes in query
4 results occur.

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1 Claim 17. A process as claimed in Claim 16 in which the step of
2 providing results to users whenever incremental changes in query results
3 occur includes a step of determining incremental changes in query
4 results.

1 Claim 18. A process as claimed in Claim 11 in which the step of
2 receiving data including events from data sources utilizes an event
3 service to furnish events.

1 Claim 19. A process as claimed in Claim 11 in which the step of
2 furnishing results of executed query processes to users utilizes an event
3 service.

1 Claim 20. A computer-implemented process as claimed in Claim 11 in
2 which the step of receiving data including events from data sources
3 includes receiving historical data from a source of historical data.